

## ORIGINAL ARTICLE

## Translation, Cultural Adaptation and Validation of the Qualiveen-30 Questionnaire in Persian for Patients with Spinal Cord Injury and Multiple Sclerosis

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**Objectives:** This study aimed to cross-culturally translate the Qualiveen-30 into Persian and validate it in Iranian patients with spinal cord injury (SCI) and multiple sclerosis (MS).

**Methods:** This was a cross-sectional prospective validation study. The translation and cross-cultural adaptation of the original questionnaire was performed in accordance with published guidelines. A total of 154 patients with SCI or MS who suffered from lower urinary symptoms for at least 6 months were asked to complete the questionnaire in the first visit to the clinic and after 3 weeks. To assess reliability, the internal consistency was assessed by Cronbach's alpha coefficient, and validity was assessed using convergent and discriminant validities.

**Results:** The Cronbach's alpha coefficients for the Qualiveen-30 at two assessments ranged from 0.82 to 0.95, indicating a good internal consistency for the questionnaire. There were high amounts of test-retest reliability for the Qualiveen questionnaire and each of its domains (ICC > 0.90). Also, Qualiveen and its domains had a moderate to high correlation with the International Consultation on Incontinence Questionnaire-Urinary Incontinence Short Form (ICIQ-UI SF) (0.36  $r$  0.57) and SF-12 MCS (–0.51  $r$  –0.11) and SF-12 PCS (–0.29  $r$  –0.19), indicating good convergent validity. Comparison of Qualiveen in groups of income, education and manner of voiding revealed the high discriminative power of this instrument. The hypothesized four factor structure was approved using confirmatory factor analysis (CFA).

**Conclusions:** In general, the Persian version of Qualiveen-30 performed is a reliable and valid measure for the evaluation of the quality of life related to lower urinary symptoms in patients with SCI or MS.

**Key words** quality of life, Qualiveen, reliability, translation, validity